

**SYSTEM AND METHOD FOR INCREASING EFFECTIVE  
PULSE-WIDTH MODULATED DRIVE SIGNAL RESOLUTION  
AND CONVERTER CONTROLLER INCORPORATING THE SAME**

**ABSTRACT OF THE DISCLOSURE**

A system for, and method of, increasing effective pulse-width modulated (PWM) drive signal resolution and a power converter incorporating the system or the method. In one embodiment, the system includes: (1) a duty cycle calculator configured to calculate a theoretical duty cycle for a PWM drive signal to be provided to an associated power converter based on at least one operating condition thereof, the theoretical duty cycle not a member of a pre-established set of allowable duty cycles and (2) a duty cycle approximator coupled to the duty cycle calculator and configured to generate a sequence of members of the set of allowable duty cycles, wherein the sequence at least approximately averages to the theoretical duty cycle.